

## THE BUDAPEST AGGLOMERATION

by

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A) The only advanced city agglomeration of Hungary has developed around Budapest, with the capital of 2 million in its center. This urban concentration is a unique phenomenon of Hungarian settlement pattern concerning its size, economic potential, and tributary area. The population of the Miskolc agglomeration, ranked second, does not exceed 0.25 million.

Long-time historical, political and geographic factors have combined to enable Budapest to gain an advantage of such unusual extent over the rest of the Hungarian cities.

Historical conditions have primarily subsisted on Hungary's peculiar socio-economic development. In this agrarian country capitalist transformation began in the second half of the last century a relatively late period, and its development was further limited. The following slow industrialization with its irregular spatial expansion provided a meager base for the process of urbanization; it was sufficient to foster the development of the capital city.

Budapest was once situated in the center of a land area several times the size of today's country effectively made use of the opportunities of its geographical position. The advantages offered by the Danube, becoming a busy waterway, the continually increasing, radially diverging rail network, the coal deposits opened nearby, and the possibilities provided by the political capital. It attracted an ever greater proportion of the growing industrial forces of production within its walls, while significant parts of the country were excluded from industrialization and urbanization.

New political boundaries, established after World War I, have separated the most advanced regional centers like Bratislava, Cluj, Zagreb from Budapest. Subsequently a certain distortion has appeared in the system of hierarchy of the Hungarian cities: the metropolis of two million is now followed by medium-size cities. These cities, numbering 100–200 thousand people, are situated partly close to the boundaries, partly have not yet developed into regional centers of full value due to the screening effect of Budapest. So the gravitational field of Budapest has virtually spread on the entire area of the country, although not with equal intensity.

### B) *Emergence and development of the central city*

Up to the last third of the 19th century three small towns, independent of each other, and a few other settlements were situated on the site of today's Budapest. In the late Middle Ages, from the 14<sup>th</sup> century Buda became a royal seat, played a leading role among the Hungarian towns, and was an important center of the exchange of goods in Central Europe. Pest was the second Hungarian town; a leading settlement of trade and handicraft. The brightest period of the two towns was ended by their Turkish occupation in 1541, which lasted until 1686. In this century and a half, but especially following the destructions in the war of liberation, Buda was almost totally destroyed and Pest also suffered extensive losses. For two decades their status as towns were withdrawn; their development was to have started again from zero point. Óbuda was also insignificant settlement.

The development of the population of the three towns between 1720 – 1869

	1720	1787–88	1804	1830	1850	1869
Buda .....	8 500	23 900	24 300	29 700	58 500	70 200
Óbuda .....	1 100	5 800	6 000	8 300		
Pest .....	2 600	20 000	28 800	60 500	127 900	200 500
Total .....	12 200	50 400	59 100	98 500	186 700	270 700

The three towns, later to be made one, had a population of only 21 thousand in 1720. In the country, damaged by war, goods exchange-relations were paralyzed, town handicraft withered, and for the major part of the urban population agriculture provided subsistence. Consequently the development of Hungarian urban pattern has significantly fallen behind that of Western Europe. The 61 settlements having the status of town had a population of only 485 thousand at the end of the 18<sup>th</sup> century, that is 100 thousand less than that of contemporary Paris, and half of that of London. During the century and a half up to 1869 the development of the three towns was relatively fast. A few years before the official unification already 270 000 people were living in the city cluster, still ranked only 30<sup>th</sup> among European cities. During this period relations between Buda and Pest considerably changed. While two-thirds of the population of the city cluster earlier lived in Buda, also two-thirds of the now increased population were living in Pest in the second half of the 19<sup>th</sup> century.

The three towns were unified in 1873, but even their total number of population did not foreshadow the metropolis that it was to be.

The Compromise (Ausgleich) of 1867, that eliminated autocratic rule following the suppressed 1848 war of liberation, helped the political consolidation and opened an ever widening path before capitalistic economy. Enjoying the advantages of the political and industrial boom, young

Budapest, regaining its role as capital, has taken off rocket-like on its course. The rapidly developing industry has exerted, with its growing labor force demand, a tremendous pull on the labor force accumulated in agriculture.

Growth of the population of Budapest, 1870 – 1975

Year	Population in thousand	Density population/km <sup>2</sup>	Actual growth in the previous period, in thousand	The population as a percentage of the population of 1870	Its proportion	
					in the population of the country	in urban population
1870 .....	302	575	—	—	5.4	32.1
1880 .....	403	767	101	133	7.6	36.7
1890 .....	560	1066	157	185	8.1	31.4
1900 .....	861	1640	301	285	12.6	39.6
1910 .....	1110	2114	249	368	14.6	42.8
1920 .....	1232	2346	122	408	15.4	43.6
1930 .....	1443	2748	211	478	16.6	45.9
1941 .....	1713	3262	270	567	18.4	48.0
1949 .....	1590	3028	—123	526	17.3	47.4
1960 .....	1805	3436	215	597	18.1	44.0
1970 .....	1945	3704	140	644	19.4	42.2
1975 .....	2071	3945	126	686	19.6	39.0

After the turn of the century the population of the city passed the threshold of one million and exceeded the figure of two million one hundred years after its consolidation. This makes it the 8<sup>th</sup> most populous town of Europe at present.

A century ago 5 Hungarian subjects or 32 urban dwellers of every hundred were living in Budapest. In line with the growth of the capital it now includes 20 subjects or 39 urban dwellers out of 100.

In the 1930s almost half of the country's urban dwellers were concentrated in Budapest, since then this proportion has steadily decreased as a consequence of the development of the other urban settlements.

The main role has always been played by migration in the growth of the rapidly expanding capital; the proportion of those born in the city has been moving around 33% during the past century. The attraction of the population has extended over the entire area of the country, with the inclusion earlier of the historical areas as well.

### C) *Spatial growth of the central city*

At the beginning of the 18<sup>th</sup> century Buda and Pest hardly extended over their medieval walls. A hundred years later, however, newly built districts were lining the walls from outside. The medieval city core was situated in today's 1<sup>st</sup> and 5<sup>th</sup> Districts, though these districts extend their area beyond the original walled enclosure. Today's 2<sup>nd</sup>, 3<sup>rd</sup>, 6<sup>th</sup>, 14<sup>th</sup> districts have grown outside the walls, determining the extent of the capital until 1950.



Growth of the area of Budapest

Year	Right bank of the Danube km <sup>2</sup>	Left bank of the Danube km <sup>2</sup>	Total area km <sup>2</sup>
1872 .....	104	90	194
1943 .....	111	96	207
1950 .....	172	353	525

Beginning with 1890, satellite towns were appearing one after another, outside the 1943 city limits. From this time on the growth rate of population has always been higher in these towns, than in the city core. The rapid increase of land prices in internal areas has prevented workers and employees of smaller incomes from settling there. But industrialization, development of various service institutions were attracting labor force en masse from the country's agricultural areas. A growing proportion of the labor force flowing in settled in the satellite towns that gradually became integral parts of the central city, forming an organic settlement cluster with it. This process was ratified by the Town Act of 1950, that declared the until then independent satellite towns to be districts of Budapest. With this today's administrative area, the 22 districts of Budapest was complete.

The number of work-places in industry and service was further increasing at a fast rate after 1950, their filling again made necessary the use of rural labor force breaking away from agriculture. The destruction or damage in the flats of the capital was of such extent during military events of World War II, that mass inflow of rural labor force set off an unbearable crowdedness in the area of the capital. Settling was restricted by order with the aim of avoiding the growing of tension. As the administrative area of the capital was closed to immigrants, they settled in settlements around the city. This has resulted in the repetition of the satellite-town formation process of the beginning of this century, but with an outer ring and under different conditions. A dormitory belt, including several dozens of settlements was formed around the capital in no time. This process has made its effects felt in wider surroundings of Budapest. The city core has gradually transformed its surroundings, and a complex agglomeration, with functional parts has come into existence to our days in the central part of the country.

#### D) Regional Structure of the Budapest Agglomeration

The present area of the capital is 525 km<sup>2</sup>, its population was 2071 thousand in 1975. Settlements drawn into its gravitation field occupy an area of 4571 km<sup>2</sup>, their population stands at 819 thousand. So today's agglomeration of Budapest extends over an area of 5096 km<sup>2</sup>, or 5.5% of the country's area, and its population of 2890 thousand in 1975 over 27% of Hungary's total. The population of this agglomeration has grown

by 430% between 1870–1975, while population growth in the rest of the country's area was only 72%.

The two basic components of the agglomeration are the central city and the agglomeration ring. These not only differ from each other, but are internally subdivided according to their functions and characteristics. Some of their elements may be set apart functionally on the basis of emphasizing their role as places of employment or residence, their characteristics are, however, determined by the way they are built in.

*The central city is divided into three parts:* the internal part of the city core with places of employment, this is surrounded by a mixed zone, with the functions of places of employment and of residence, and finally the outer belt having the principal function of residence.

1. *The city core*, the City of Budapest or CBD is limited to the 5<sup>th</sup> district on the left bank. Its population has grown by only 17% between 1870–1975. First of all organs of government, direction centers of banking and finance, of wholesale trade, central institutions of scientific and cultural life are placed here.

Of course these functions are not limited to the area of this one district, they have stepped over its borders to all directions. At the same time the residential characteristics of the internal core have not been fully ended, though its population is on the decline since 1960. Residential density of population in the City of Budapest is 18 200 persons/km<sup>2</sup>, 65% of its population is gainfully employed, while the density of workplaces is 38 000/km<sup>2</sup>. Some 22 000 persons leave the City daily, and over 100 000 arrive there for the purpose of work. The shopping center of the district, developed to a limited degree attracts hundreds of thousands more people to the area.

The number of working places here exceeds threefold the number of locally residing, gainfully employed population. Nine tenths of the working places belong to the tertiary sector.

2. *The mixed zone, with places of residence and employment*, includes the districts of the number 1–3, and of 6 through 14. The population of this belt has increased by 479% between 1870–1975. Within the zone the right bank population has increased at a faster rate than the left bank. This internal belt concentrates 720 thousand working places, one-third of them in major industrial units. Two-thirds of Budapest industry are situated here. Residential density of population of the zone is 5737/km<sup>2</sup>, 55% of the population is gainfully employed, density of working places is 3240/km<sup>2</sup>. The fact that the number of the locally residing and gainfully employed and that of the local working places are nearly identical: 720 thousand and 739 thousand respectively indicates the zone to be one with places of employment and of residence. Working places and workers do not however, meet within the zone: some 490 thousand workers arrive and 470 thousand leave the zone for the purpose of work. That the increase of population has been very limited since 1960 proves the decrease of significance of this zone as residence.



3. *The outer belt with places of residence and employment* includes the districts incorporated into the capital in 1950. It is primarily a residential area, and this is also indicated by the fact that its population has increased more than 24 times between 1870–1975. It is an important zone of employment, too. Half of its 230 thousand working places are in major industrial units, one-third of Budapest manufacturing industry is found here. Residential density of population is 2400/km<sup>2</sup>, 50% of the population is gainfully employed, density of working places is 780/km<sup>2</sup>. The major part of the zone is dominated by family houses with gardens, it is the favorite residential belt of blue-collar workers and employees. Almost 80% of homes is personal property.

*The agglomeration belt* includes 144 settlements, including 4 towns. The inner belt with considerable ties with the central city and the as yet little transformed outer zone are isolated on the basis of the intensity and characteristics of connections developed with the capital as a concentration of working places and as an industrial center and on that of the degree changes brought about subsequently.

1. *The inner agglomeration belt* includes 61 settlements with an area of 1610 km<sup>2</sup>, and where the average density of population is 300/km<sup>2</sup>. The proportion of active wage-earners is 45%, and at least 55–60% of them commutes daily to their working places in Budapest. Three-fifths of all commuters to the capital come from this zone. The proportion of those employed in agriculture is 11%, the density of local working places is 76/km<sup>2</sup>. The transformation of the settlements of the agglomeration belt began by the pulling effect of the central city on the workers of the once agricultural settlements with its working places of industry and service, with the consequent transformation of the employment structure of the population at a rapid pace. Industrialization between 1950–1970 has quickly depleted the local labour reserves in agriculture, and stopped the decline of population in the settlements by employment through commuting. With the introduction of the administrative regulation of settling in Budapest these settlements have even attracted newcomers with their good transport facilities. New settlers became dominant in the once agrarian villages, agrarian features of these settlements faded, and their transformation into satellite towns began.

It is characteristic of the rate of this development, that the population of the internal zone has increased 5 and a half times between 1870–1975 and this process indicates an ever rising trend. A considerable proportion of the settlement were given new, urban apartment blocks, while agriculture is definitely changing more and more to provide for the city (hothouse vegetable growing, flower gardening, orchards, livestock fattening farms etc.).

2. Over 80 settlements are included *in the outer agglomeration belt*, with an area of 2961 km<sup>2</sup> and an average density of population of 114/km<sup>2</sup>. Some 41% of the population is actively employed, 30–40% of them commutes to the central city for work daily. Nearly two-fifths of those commuting to Budapest comes from settlements of the outer belt. These settle-

ments have retained much more of their agrarian characteristics, 24% of those employed still subsist on agriculture. The proportion of new settlers here is still insignificant, the restratification of the autochthon population is under way. It is also characterized by the large number of those working in transportation branches. The increase of population here was 118% between 1870-1975 - well surpassing that of other areas of the country.

Though only one-third of the wage-earners of the outer agglomeration belt are attracted to working places in Budapest, but tighter links to other commuting centers have also not been formed from these settlements. The employing role of agriculture is also important, on the other hand industrial plants of significant size have been built in this belt during the past two decades. This location of industry that involved the inner agglomeration belt, has aimed first of all at the loosening of the Budapest concentration. These new centers of industry are, however, placed too close to Budapest and did not end the expansion of the central agglomeration but united with it, further increased it with an outer ring of employment.

Beyond the outer agglomeration belt the attraction of Budapest keeps on fading, and the gravitational field of regional centers situated at a 60 km-radius are starting to prevail gradually.

#### *E) A few characteristic features of the Budapest agglomeration*

1. The agglomeration has developed outside from the center. The population of the satellite towns did not, however, move out from the central city, but migrated there from agrarian areas of the country i.e. from outside. This has basically determined the social structure of the settlement on the way of becoming satellite towns. Migration outside from the center has only developed north of the capital in the zone along the river Danube, and towards the settlements of the hills surrounding the capital from the west - these areas having recreational functions as well. This phenomenon is primarily characteristic of white-collar workers.

2. The development of the agglomeration zone has been taking shape in the form of rings in the internal belt next to the capital, its development changes to a radial form with growing distance along the 11 railroad lines, the 4 suburban train lines and the 10 bus lines operating with a great number of vehicles. The transformation of the village-type settlements around the industrial centers developed in the agglomeration belt is again reinforced in the ring-like form.

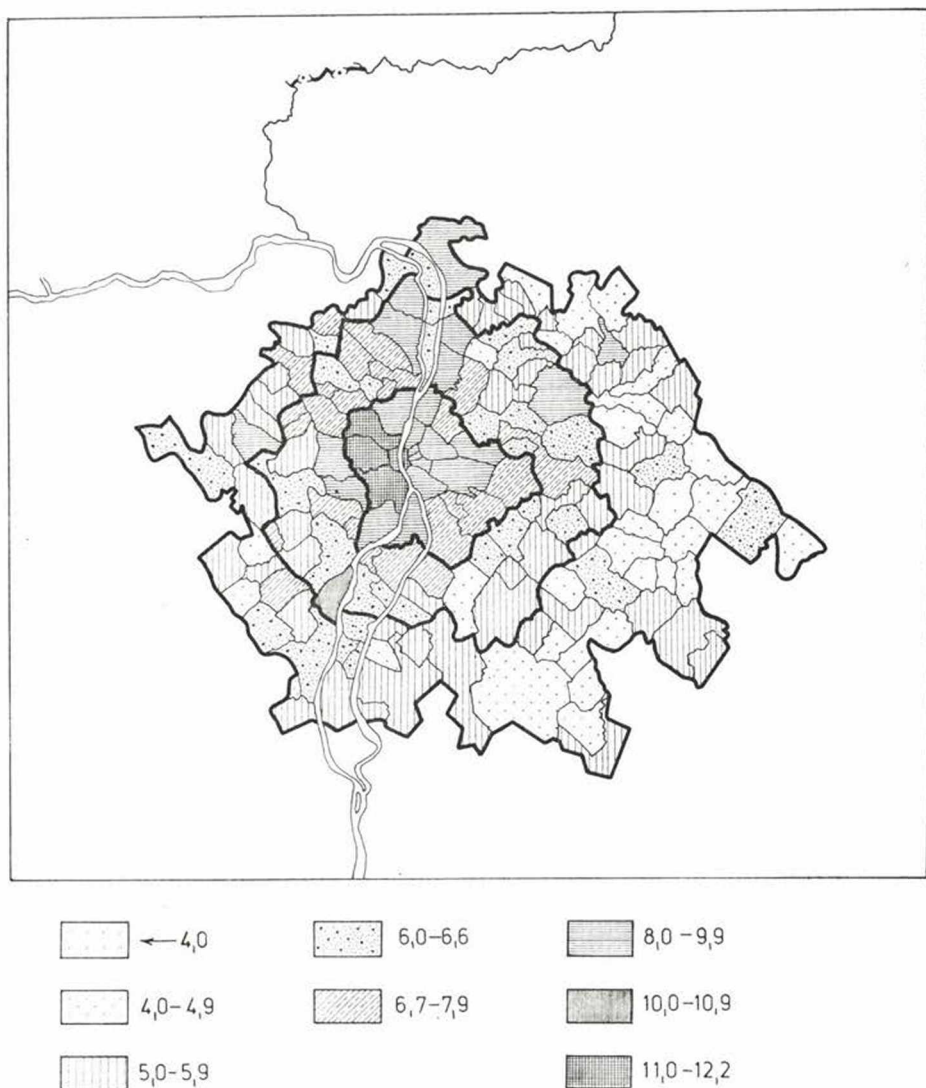
3. 60% of the commuters into the capital starts from within a radius of 25 kms, and despite this, their average time of travelling is not less than 60 minutes. Time taken for travelling increases with the growing distance from Budapest to such a rate, that calculated for the entire tributary area, it is over 2 hours. 55% of the nearly 1/4 million commuters uses trains, 10% suburban trains, 28% takes buses, while some 7% drives his own car.

4. To decrease the commuting distance those settling in the tributary area of Budapest are concentrated primarily in the inner belt. 88% of the increase of population in these settlements comes from migration and only



12% from natural population growth. The fast expansion of population sets a heavy burden on housing conditions despite the acceleration of apartment building. Apartment-sharing has become widespread and this has resulted in undesirable crowdedness at places.

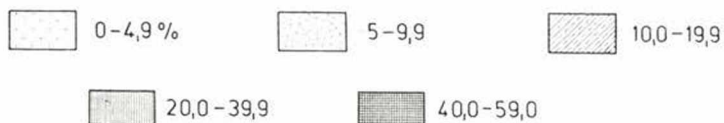
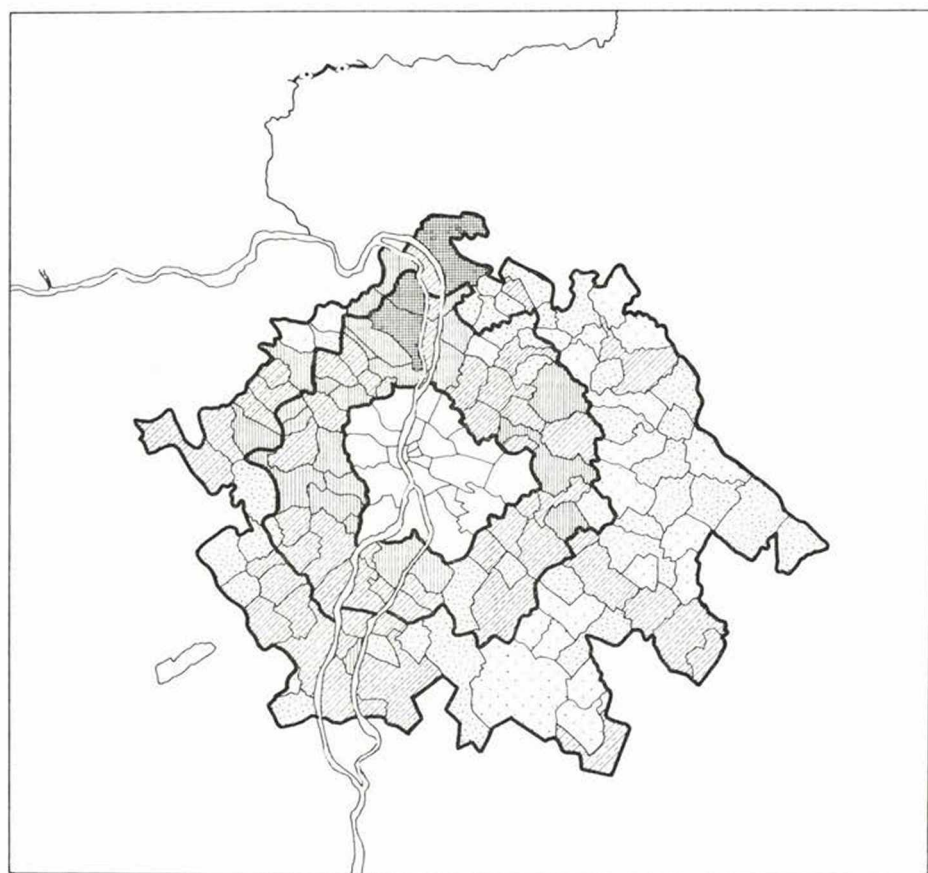
The proportion of apartments in personal property keeps on rising with growing distance from the city core of Budapest and it is almost the exclusive form of property in the agglomeration belt.



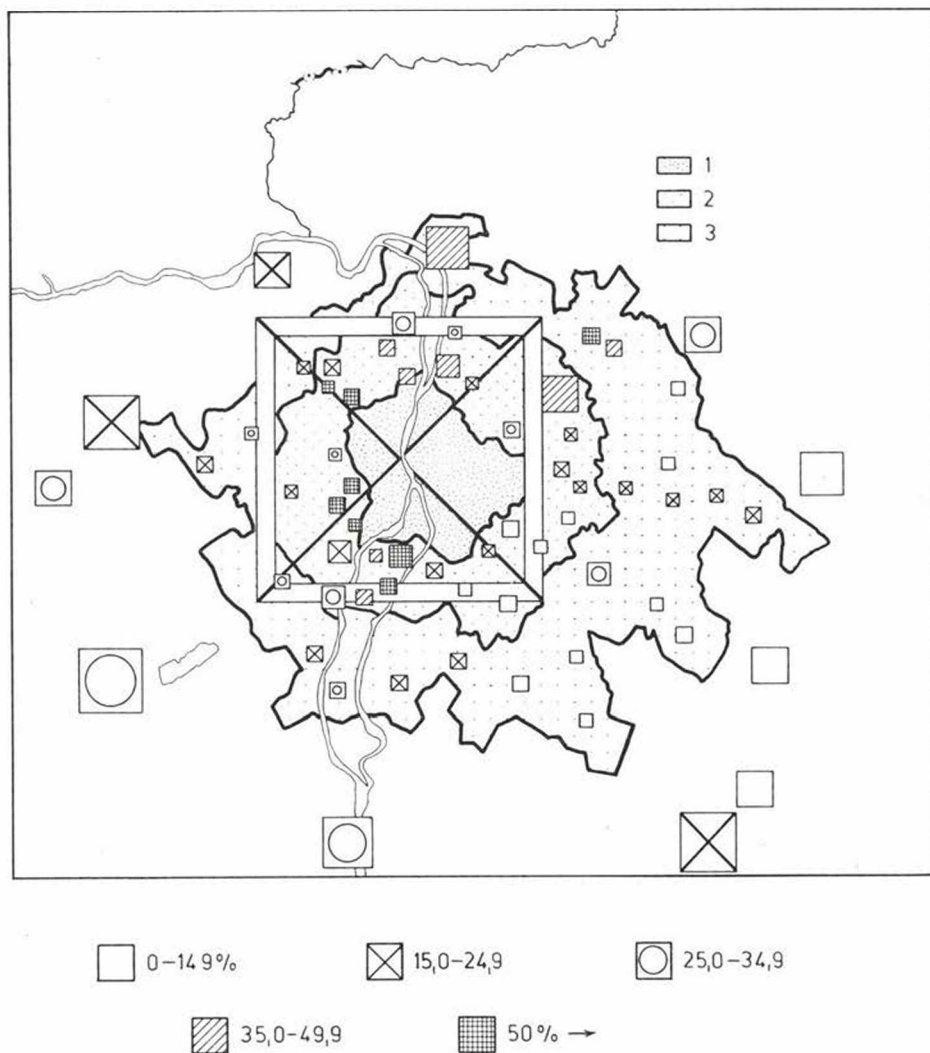
*Fig. 1.* Educational level of the population over 24 years, 1970. Number of years of completed cycles:

8-year grade school; 3-year vocational training school; 4-year high school; 4-year university;





*Fig. 2.* White-collar workers as a percentage of commuters, 1970



*Fig. 3.* Incommuters as a percentage of wage-earners working at the settlement. The areas of squares are proportional to the number of wage-earners working at the settlement.

1 = central city; 2 = inner commuting belt; 3 = outer commuting belt



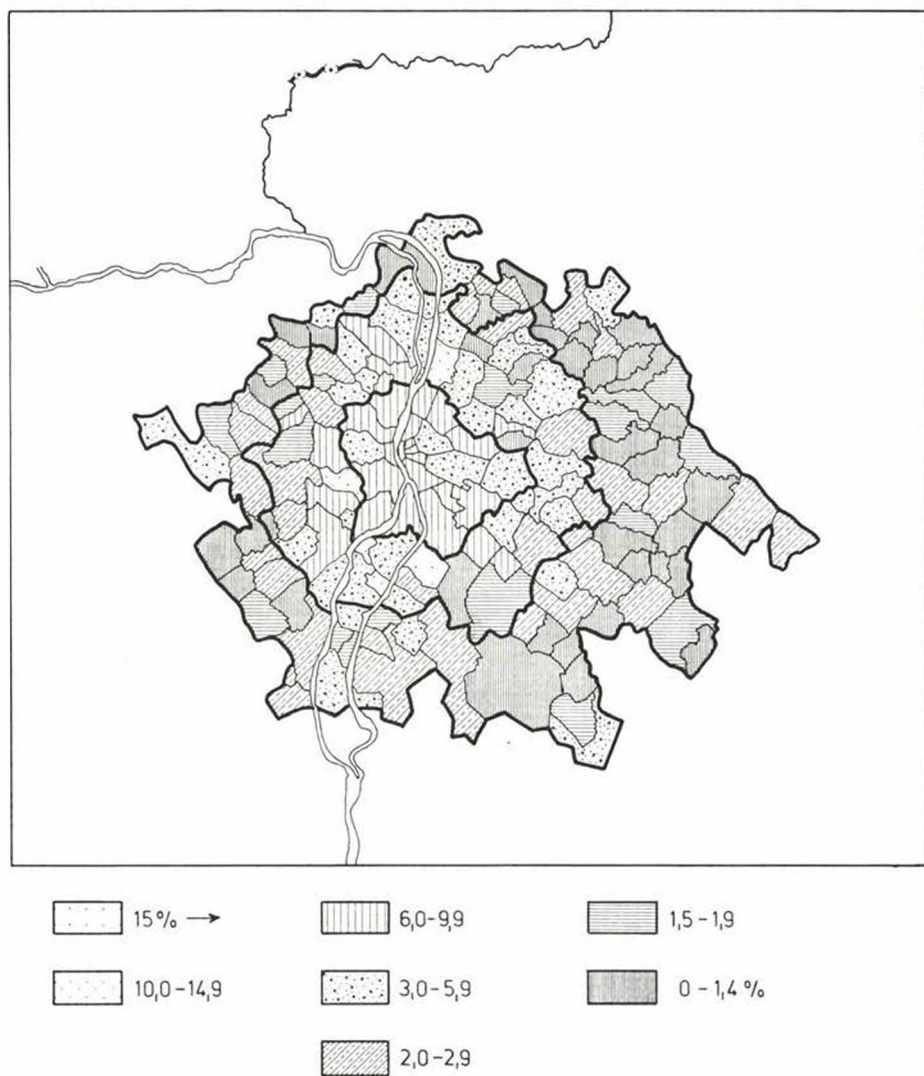
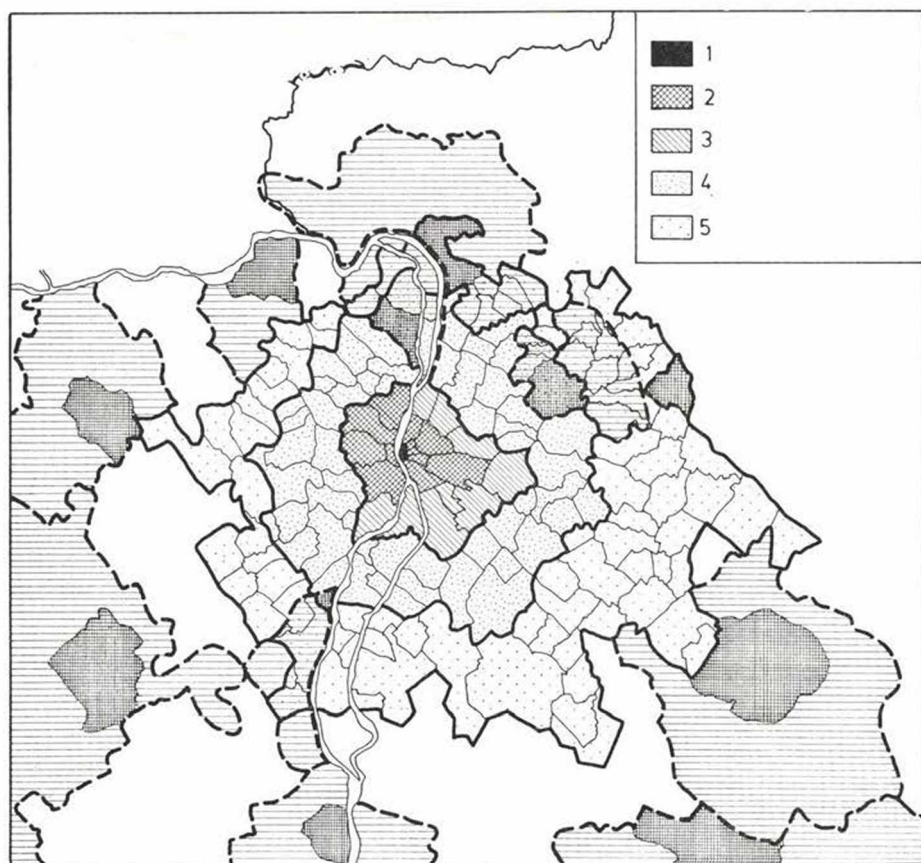


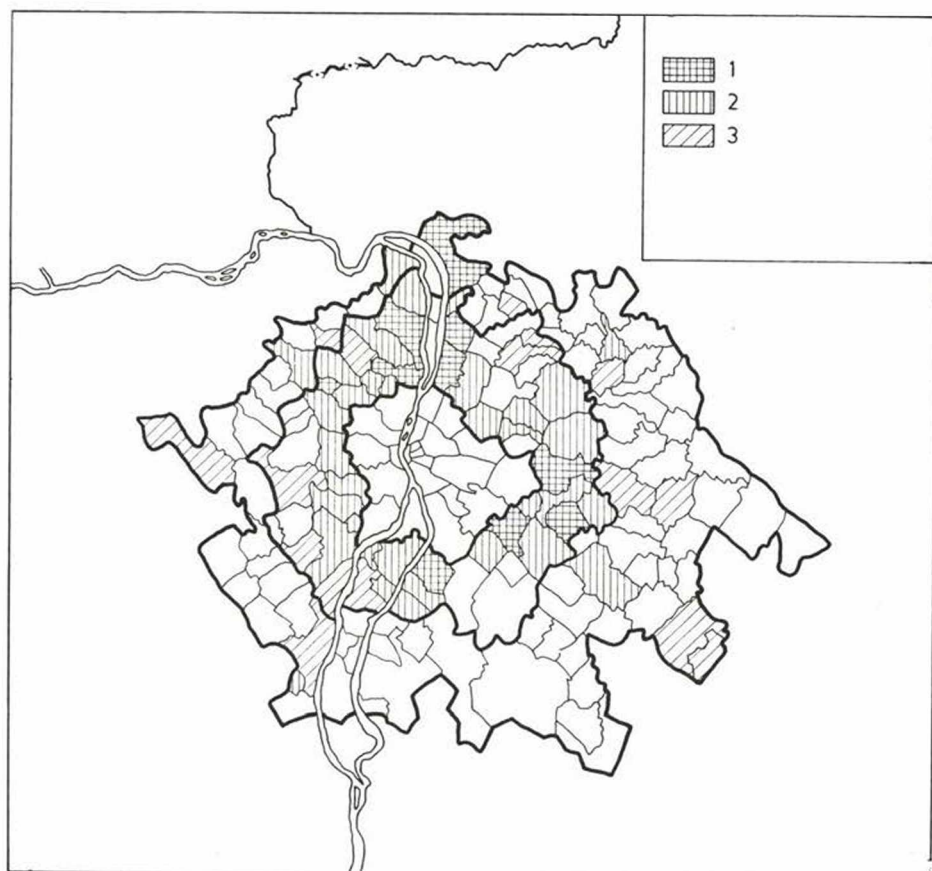
Fig. 4. Proportion of apartment-sharers (co-tenants) from the residential population, 1970.



*Fig. 5.* Structure and extension of the Budapest agglomeration, 1970

1 = city; 2 = working-place and residential belt; 3 = residential and working-place belt; 4 = inner commuting belt; 5 = outer commuting belt with surrounding cities and their commuting belts





*Fig. 6.* Decrease of gainfully occupied employees in agriculture below 20%  
1 = before 1941; 2 = before 1960; 3 = before 1970

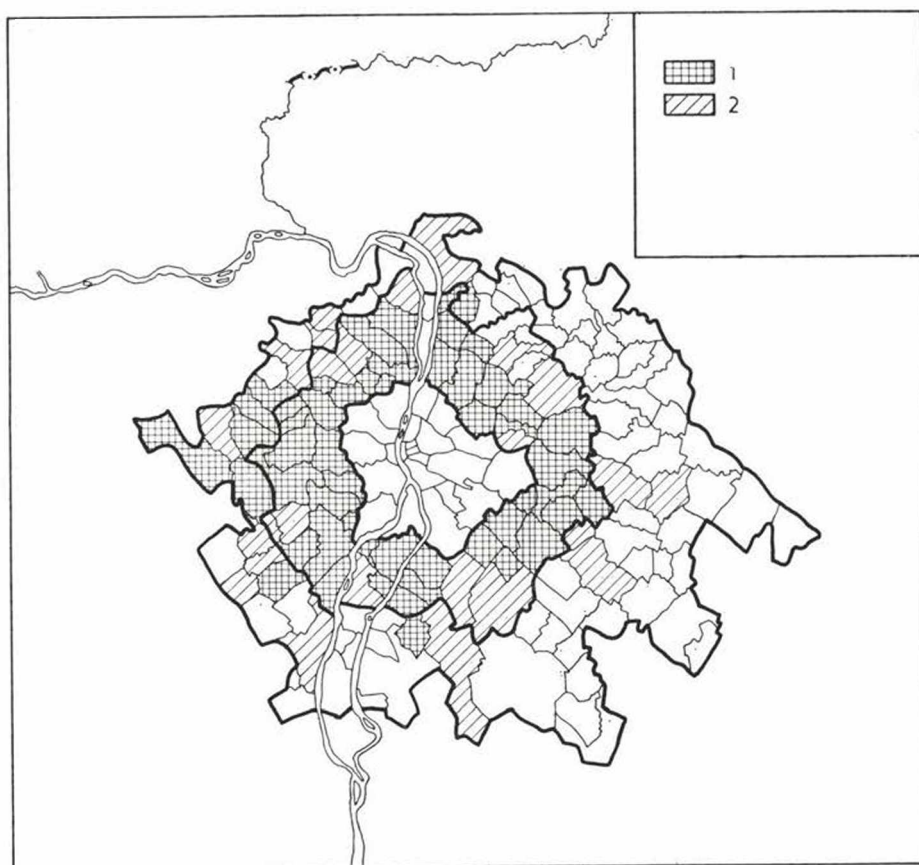


Fig. 7. One hour commuting time distance  
1 = 1940; 2 = 1975

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## РЕЗЮМЕ БУДАПЕШТСКАЯ АГЛОМЕРАЦИЯ

Единственная крупная агломерация Венгрии сформировалась вокруг Будапешта. Это уникальное явление в венгерской сети населенных пунктов сложилось под влиянием специфических исторических, политических и географических факторов.

Современная территория столицы составляет 525 км<sup>2</sup>, а её население в 1975 году достигло 2 071 000 человек. Зона влияния города (агломерационный пояс) охватывает территорию 4 571 000 км<sup>2</sup>, на которой проживает 891 000 человек. Хотя территория занимаемая агломерацией не превышает 5,5% площади страны, в ней проживает 27% населения Венгрии.

В агломерации выделяются две основные составные части: центральный город и агломерационный пояс. В свою очередь, центральный город делится на три части: ядро города, с большим количеством мест приложения труда, зона производственно-жилых кварталов окружающая ядро и, наконец, зона главным образом жилых кварталов. Во внутреннем ядре города количество работающих (9/10 которых занято в третичном секторе) в 3 раза превышает количество постоянно живущего здесь населения. Во второй, производственно-жилой зоне, число мест приложения труда почти равно количеству активного, работающего населения, здесь проживающего. Все же и в этой зоне отмечаются маятниковые миграции: полмиллиона работающих ежедневно ездит из этого пояса на работу в центр столицы и примерно столько же приезжает сюда на работу из других зон.

Во внешней, жилой-производственной зоне, количество проживающего здесь самостоятельного населения на 1/3 больше, чем количество имеющих здесь мест приложения труда.

В агломерационном поясе, в свою очередь, выделяются внутренняя и внешняя зоны. Из внутренней зоны (61 населенный пункт) – 55–60% работающих ездит на работу в Будапешт, а из внешней зоны (83 населенных пункта), в которой важную роль ещё играет сельское хозяйство, на работу в столицу ездит только 30–40% работающих.

Рост количества населения отмечается из центра к периферии агломерации. 60% участвующих в трудовых маятниковых миграциях приезжает с территории, расположенной не далее 25 км. от города, все же время, затрачиваемое на поездки, составляет в среднем 60 минут.